



Patent Application
Attorney Docket No.: 56130.000062
Client Reference No.: 12812RGUS01U

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Robert J. Arnott

Appln. No.: 09/740,854

Filed: December 21, 2000

For: APPARATUS AND METHOD AND
ESTABLISHING AUDIO AND
VIDEO CONFERENCING

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APPEAL BRIEF

Sir:

This Appeal Brief is submitted in support of the Notice of
Appeal filed February 9, 2004.

REAL PARTY IN INTEREST

The Appellant, Robert J. Arnott, is the Applicant in the
above-identified patent application. The Appellant has assigned
his entire interest in the above-identified patent application to
Nortel Networks Limited, 2351 Boulevard Alfred-Nobel, St. Laurent,
Quebec, H4S 2A9.

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RELATED APPEALS AND INTERFERENCES

The Appellant, the Appellant's legal representative, and the Assignee are not aware of any other appeals or interferences which will directly affect, be directly affected by, or have a bearing on the Board's decision in this Appeal.

STATUS OF CLAIMS

Claims 1, 2, 4-6, 9, 12-22, and 24-30 are pending in the above-identified patent application. Claims 1, 2, 4-6, 9, 12-18, 24-26, and 30 were finally rejected in an Office Action dated October 9, 2003. Claim 22 was finally rejected in a first Advisory Action dated February 2, 2004. The final rejection of claims 1, 2, 4-6, 9, 12-18, 22, 24-26, and 30 is hereby appealed.

Claims 1, 2, 13, and 24 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Huang (U.S. Patent No. 6,148,072).

Claims 4, 5, 26, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of Bremer et al. (Pub. No. US2001/0022836A1).

Claims 6 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of Mihara (U.S. Patent No. 6,323,892).

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of

Mihara (U.S. Patent No. 6,323,892) and further in view of Haegebarth (Japan Pub. No. 02000092463A).

Claims 14-18, 22, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of Bremer et al. (Pub. No. US2001/0022836A1) and further in view of Fan (U.S. Patent No. 6,519,250).

Claims 19-21 stand objected to, although the Examiner indicates that claims 19-21 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 27-29 are allowed.

STATUS OF AMENDMENTS

The above-identified patent application was filed on December 21, 2000. A first Office Action (Paper No. 3) was issued on May 16, 2003, rejecting claims 1-18, 23 and 24. On August 11, 2003, an Amendment was filed in response to the first Office Action, claims 3, 7, 8, 10, 11 and 23 were cancelled, amendments were made to claims 1, 2, 4-6, 9, 12-16, 18, 22 and 24, and new claims 25-30 were added. A Final Office Action (Paper No. 5) was issued on October 9, 2003, again rejecting claims 1, 2, 4-6, 9, 12-18, 24-26, and 30. On November 14, 2003, a Response was filed in response to the Final Office Action. A first Advisory Action (Paper No. 7) was issued on February 2, 2004, rejecting claim 22

and maintaining the final rejection of claims 1, 2, 4-6, 12-18, 24-26, and 30. On February 9, 2004, a Notice of Appeal from the Primary Examiner to the Board of Appeals, together with a Petition for Extension of Time, was filed in response to the first Advisory Action.

SUMMARY OF INVENTION

The present invention, as set forth in claim 1, and as described and shown in the specification and Figures 1-5 of the above-identified patent application, respectively, is directed to a communications device. The communication device may comprise a first interface to a voice channel of a subscriber line for transmitting and receiving a voice component of a video conferencing session. The communication device may also comprise a second interface to a data channel of the subscriber line for transmitting and receiving a video component of the video conferencing session. The communications device may be configured to establish a connection to at least the data channel based at least in part on a pre-determined signal received via the voice channel.

The present invention, as set forth in claim 24, and as described and shown in the specification and Figures 1-5 of the above-identified patent application, respectively, is also directed to a method for establishing a video conferencing

session. The method may comprise the steps of: (a) providing a first interface to a voice channel of a subscriber line for transmitting and receiving a voice component of the video conferencing session, (b) providing a second interface to a data channel of a subscriber line for transmitting and receiving a video component of the video conferencing session, and (c) establishing a connection to at least the data channel based at least in part on a pre-determined signal received over the voice channel.

The present invention, as set forth in claim 27, and as described and shown in the specification and Figures 1-5 of the above-identified patent application, respectively, is further directed to a communications device. The communication device may comprise a first interface to a first channel for transmitting and receiving voice signals over a voice network. The communication device may also comprise a second interface to a second channel for transmitting and receiving video data over a data network. The communication device may further comprise an analog modem to receive a tone burst, the tone burst comprising a sequence of data transmitted from a second communications device via the first channel. The communication device may additionally comprise a filter to pass the tone burst while excluding any unused frequencies. The communications device may be configured to

establish a connection to at least the second channel upon receiving the tone burst.

ISSUES

The issues on appeal are as follows.

(a) Whether claims 1, 2, 13 and 24 are anticipated by Huang (U.S. Patent No. 6,148,072) under pre-AIPA 35 U.S.C. § 102(e).

(b) Whether claims 4, 5, 26, and 30 are unpatentable, under 35 U.S.C. § 103(a), over Huang (U.S. Patent No. 6,148,072) in view of Bremer et al. (Pub. No. US2001/0022836A1).

(c) Whether claims 6 and 9 are unpatentable, under 35 U.S.C. § 103(a), over Huang (U.S. Patent No. 6,148,072) in view of Mihara (U.S. Patent No. 6,323,892).

(d) Whether claim 12 is unpatentable, under 35 U.S.C. § 103(a), over Huang (U.S. Patent No. 6,148,072) in view of Mihara (U.S. Patent No. 6,323,892) and further in view of Haegebarth (Japan Pub. No. 02000092463A).

(e) Whether claims 14-18, 22, and 25 are unpatentable, under 35 U.S.C. § 103(a), over Huang (U.S. Patent No. 6,148,072) in view of Bremer et al. (Pub. No. US2001/0022836A1) and further in view of Fan (U.S. Patent No. 6,519,250).

GROUPING OF CLAIMS

Claims 1, 2, 13, and 24 stand or fall together. Claims 4, 5, 26, and 30 stand or fall together. Claims 6 and 9 stand or fall together. Claim 12 stands or falls by itself. Claims 14-18, 22, and 25 stand or fall together. The reasons why each group of claims is separately patentable are presented in the Argument section below.

ARGUMENT

The Appellant respectfully traverses the art rejection applied against the claims now pending on appeal. As discussed below, it is submitted that the Examiner has failed to understand a key difference between the claimed invention and the alleged prior art, and has not met the burden of proof in establishing the obviousness of the appealed claims. It is submitted that the cited references do not teach or suggest every element of the claimed invention, and some of the cited references even teach away from the claim invention.

I. THE EXAMINER HAS FAILED TO UNDERSTAND A KEY DIFFERENCE BETWEEN THE CLAIMED INVENTION AND THE ALLEGED PRIOR ART

On page 2 of the Final Office Action, claims 1, 2, 13 and 24 were rejected under pre-AIPA 35 U.S.C. § 102(e) as being anticipated by Huang (U.S. Patent No. 6,148,072). The Appellant respectfully submits that the anticipation rejection is improper

due to the Examiner's failure to understand a key difference between the claimed invention and Huang.

Under 35 U.S.C. § 102, the Patent Office bears the burden of presenting at least a *prima facie* case of anticipation. In re Sun, 31 USPQ2d 1451, 1453 (Fed. Cir. 1993) (unpublished). Anticipation requires that a prior art reference disclose, either expressly or under the principles of inherency, each and every element of the claimed invention. Id. "In addition, the prior art reference must be enabling." Akzo N.V. v. U.S. International Trade Commission, 808 F.2d 1471, 1479, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986), cert. denied, 482 U.S. 909 (1987). That is, the prior art reference must sufficiently describe the claimed invention so as to have placed the public in possession of it. In re Donohue, 766 F.2d 531, 533, 226 USPQ 619, 621 (Fed. Cir. 1985). "Such possession is effected if one of ordinary skill in the art could have combined the publication's description of the invention with his own knowledge to make the claimed invention." Id.

In rejecting claims 1, the Examiner alleges that "Huang discloses a communication device comprising: a first interface to a voice channel of a subscriber line for transmitting and receiving a voice component and a second interface to a data channel of the subscriber line for transmitting and receiving [a] video component [of a] video conferencing session, wherein the

communication device is configured to establish a connection to at least the data channel based at least in part [on] a predetermined signal received over the first channel." (Final Office Action, pp. 2-3)(citations omitted). The Examiner provides a similar line of reasoning in rejecting independent claim 24. (Final Office Action, page 3).

A. The Huang Patent Teaches Voice and Video Transmissions Over Two or More Separate Telephone Lines

Appellant concurs with the Examiner in that Huang discloses the transmission of a voice component of a video conference over a first channel and a video component of the video conference over a second channel. However, it should be noted that Huang discloses transmitting the voice and video components **separately over two or more separate telephone lines** and fails to disclose the transmission of voice and video components **over separate channels of a same subscriber line**.

The following passage cited from Huang illustrates its teaching of voice and video transmissions over **two or more separate telephone lines**:

The present invention involves a method and system **that use two or more telephone lines** to initiate video communication. **A user uses a first line to initiate an analog voice call** with another user. When one or both users desire to conduct a video call, the system uses a modem to **initiate a digital video (including image and voice) link on a second line**. **During this initialization period, the first line continues to**

carry the analog audio communication. After the video link on the second line is established, voice communication can be switched to the second line. The system then uses another modem to initiate a separate video link on the first line. During the setting up of the digital link on the first line, video communication (including both voice and images) continues to be carried on the second line. Consequently, there is no gap in audio communication. After the digital link on the first line is established, both the first and the second lines can be used to carry video communication. As a result, the total bandwidth of the system is increased.

(Huang, col. 2, lines 8-25) (emphasis added).

Moreover, Huang teaches that

[a] videophone that can be used to implement the method and system of the present invention has been disclosed in a PCT patent application PCT/US97/18526 (PCT publication number WO 98/17053) relating to an invention by the present inventor. This PCT application is incorporated herein by reference. ***This videophone is able to utilize two or more telephone lines for the purpose of expanding the bandwidth.*** One aspect of the present invention is to use this videophone to maintain continuous audio connection throughout the call. FIG. 2A shows a videophone communication system 620 that is used to implement this aspect of the present invention. . . . ***Note that videophone system 622 may contain more than two modems to further increase the bandwidth.***

A block diagram of the videophone system 650 used in the present invention is shown in FIG. 2B. . . . ***In order to use two telephone lines,*** videophone system 650 of FIG. 2B contains one additional modem 665. It should be understood that it is possible for videophone 650 to contain more than two modems. For example, FIG. 2B also shows a third modem 666.

FIG. 3 is a schematic diagram showing the method of the present invention. ***The local and remote telephones first establish analog audio connection using line 1*** (state 706) The caller and receiver then agree

to seeing each other using the videophones For easy description, it is assumed that **modem 630 of videophone 622 is connected to line 1 and modem 644 is connected to line 2**. After a user indicates a desire to do video communication (by, e.g., press a button on videophone 622), **videophone modem 644 on line 2** initiates digital dialing (step 708). As pointed out above, initialization step 708 may takes [sic] about 30 seconds. At the conclusion of the initiation period of step 708, digital mode is established, and **digitally generated video (voice and images)** of the other videophone appears (state 710) on display 636 of videophone 622. **Up to this time, audio communication between the remote and local telephones remains active on line 1. However, shortly (or immediately) after the establishment of state 710, modem 630 of line 1 begins to call (digitally) the modem of the remote videophone, and analog audio communication on line 1 is cut off** (state 716). The telephone number can be retrieved from register 618. Modem 630 now undergoes an initiation period (step 718). **However, the users can still maintain audio communication because (digital) audio connection of line 2 has previously been established.** Consequently, the users can still talk to each other during this period. During step 718, the local and remote videophones **determine that two telephone lines are available for digital transmission. Consequently, a communication protocol is set up to use the bandwidth of these two lines. A dual-line videophone communication can begin** (state 720).

(Huang, col. 3, line 66 to col. 4, line 65)(emphasis added).

As the above-cited passages reveal, Huang contemplates the use of **two or more separate telephone lines** to facilitate video communications whereby **a first telephone line** may be used for voice communications while a digital link is set up on **a second telephone line** so that audio communications are not interrupted. See, e.g., Huang, col. 1, lines 47-58 and col. 2, lines 10-15.

After the digital link is established on the **second telephone line**, the voice and image data is communicated via the digital link of the **second telephone line** and voice communications on the **first telephone line** are shut off. See, e.g., Huang, col. 4, lines 46-55). A **second digital link** then may be established on the **first telephone line** to increase the overall available bandwidth and the **digital voice and image data may be transmitted over both telephone lines**. See, e.g., Huang, col. 2, lines 17-25, col. 4., lines 57-65). Therefore, the voice and video transmissions taught by Huang clearly involve **at least two separate telephone lines**.

B. The Claimed Invention Recites Voice and Video Transmissions Over Separate Channels of a Same Subscriber Line

In contrast to the teachings of Huang, the claimed invention recites the limitations of "a first interface to **a voice channel of a subscriber line** for transmitting and receiving a voice component of a video conferencing session" and "a second interface to **a data channel of the subscriber line** for transmitting and receiving a video component of the video conferencing session." See, e.g., claim 1 and claim 24. Thus, the voice channel and the data channel as recited in the present application are part of **a same subscriber line** (e.g., a telephone line), whereas Huang requires the use of **separate telephone lines**.

Textual support for voice and video transmissions over separate channels of a same subscriber line may be found in the Detailed Description section of the present application. For example, the present application discloses:

In addition, ADSL and G.Lite allow for the use of one connection for the transmission of both voice and video data. Accordingly, although the first connection 115 and second connection 145 are illustrated separately in FIG. 1, those skilled in the art will realize that they may be one in the same when ADSL or G.Lite is used. (Page 9, lines 3-7).

Furthermore, the present application discloses:

Digital subscriber lines or xDSL technologies use modulation schemes to pack data on to copper wires of the local telephone loop. It should be recognized that the invention may utilize various types of digital subscriber lines, including symmetric digital subscriber lines (SDSL), high-data-rate digital subscriber lines (HDSL), and voice-over digital subscriber lines (VoDSL) for the transmission of video data. (Page 8, lines 16-21).

The above-quoted passages make it clear that the claimed invention contemplates the use of a single subscriber line such as a telephone line for transmitting and receiving both voice and video components of a video conferencing session.

C. The Examiner Has Failed To Grasp The Key Difference Due to Misunderstanding of The Terms "Subscriber Line" and "Channel"

Appellant submitted a similar argument in the Response to the May 16, 2003, Office Action. In responding to Appellant's arguments, the Examiner stated:

Applicant argues that [Huang] does not disclose, teach or suggest the feature of transmitting and receiving the video and voice components via separate channels of a single subscriber line. Contrary to Applicant's interpretation of [the Huang] reference, [Huang] discloses using one channel for voice communication and when [the] users decide to setup a video call, another channel is set up [for] video communication [citing Huang, col. 2, lines 8-25]. Also [Huang] suggests the use of two telephone channels to maintain audio and video communications between the users [citing Huang, col. 4, lines 45-51, 61-65]. This clearly reads on applicant's claim 1. Since [Huang] teaches [the] use of *two channels of a subscriber line* for receiving audio and video component as explained above, rejection of independent claims 1 and 24 is maintained. (May 16, 2003 Office Action, page 8).

Based on the Examiner's response to Appellant's remarks, and in view of the relevant passages of Huang cited above, Appellant respectfully submits that Examiner's misapplication of Huang to claims 1 and 24 results from Examiner's failure to consider the limitation that both the voice channel and data channel are of the same subscriber line as recited in both claims 1 and 24. Appellant further submits that Examiner's failure to consider this limitation may stem from Examiner's apparent misunderstanding of the ordinary meanings of the claim terms "subscriber line" and "channel."

One of ordinary skill in the art will recognize that the term "subscriber line" ordinarily refers to the physical medium by which two communications devices communicate. A subscriber line (also commonly known as a "loop") may include, for example, a

digital subscriber line (DSL), telephone line/loop (e.g., copper lines or "twisted pair"), and/or a coaxial cable line, etc. A "channel," used in the present context, ordinarily refers to a portion of the transmission capabilities of a subscriber line used to communicate signals representing data. For example, in a frequency-division multiplexing-based system, a channel may include a portion, or "band," (e.g., a voice channel comprising a frequency band from 0-4 kilohertz) of the applicable frequency bandwidth of the subscriber line. Similarly, in a time-division multiplexing-based system, a channel may include a specific recurring timeslot (e.g., a channel comprising 50 milliseconds of transmission time every 250 milliseconds). Therefore, as appreciated by those of ordinary skill in the art, transmissions over separate channels do not necessarily imply use of two or more separate subscriber lines.

In DSL, a channel ordinarily represents a subset of frequencies of the available frequency bandwidth of a subscriber line. For example, as disclosed in the article "How DSL Works" by Curt Franklin, the carrier-less amplitude/phase (CAP) technique implemented by asynchronous digital subscriber line (ADSL) systems

operates by dividing the signals on a telephone line into three distinct bands [i.e., channels]: Voice conversations are carried in the 0 to 4 KHz (kilohertz) band, as they are in all POTS [Plain Old Telephone System] circuits. The upstream channel (from the user back to the server) is carried in a

band between 25 and 160 KHz. The downstream channel (from the server to the user) begins at 240 KHz and goes up to a point that varies depending on a number of conditions . . . but has a maximum of about 1.5 MHz (megahertz). This system, with the three channels widely separated, minimizes the possibility of interference between the channels on one line, or between the signals on different lines.

("How DSL Works," page 3). This reference, as well as additional general references describing the relationship between a channel and a subscriber line was provided in a Supplemental Information Disclosure Statement submitted with the Response to the Final Office Action.

Therefore, it should be understood that a channel and a subscriber line are not synonymous in that a channel represents a portion of the transmission capabilities of a subscriber line, e.g., a portion of the frequency bandwidth, whereas a subscriber line is the physical medium over which data is communicated via one or more channels.

The Examiner's misunderstanding of the terms "channel" and "subscriber line" may have been caused by Huang's use of the term "channel." The following quoted sentences include all the instances of the word "channel" in the Huang patent:

"establishing a voice communication channel between said first telephone line and said third telephone line; ... sending by said second device said voice-band packet to said first device via said voice communication channel; ..." (Huang, claim 1).

"terminating said voice communication channel after initiation of said first digital call" (Huang, claims 2 and 3).

"For example, H.324 describes a set of procedures to set up channels, ..." (Col. 3, lines 41-42).

"When it is time to establish video communication, one of the two videophones (e.g., the first videophone) passes its second telephone number to the second videophone through a previously established telephone communication channel." (Col. 5, lines 1-5).

"In step 746, this packet is sent to the second videophone via the already established voice channel." (col. 5, lines 24-25).

"Further, the second telephone channel does not have to be used as a digital channel." (col. 5, lines 62-63).

When reading these quoted sentences, a person of ordinary skill in the art would realize that the term "channel" in Huang is synonymous to "connection" or "session." If Huang had intended the term "channel" to mean a frequency channel or sub-carrier as in DSL technology, most of the quoted sentences would not have been technologically consistent, since frequency channels are usually designated by standards or regulations, and cannot be "established" or "terminated" at will.

Furthermore, the Examiner seems to rely on the illustration of modem 630, modem 644 and the "subscriber line 646" in Huang's FIG. 2A as evidence that Huang discloses the use of two channels in a single subscriber line. (Final Office Action, pages 2-3). However, contrary to the Examiner's interpretation, item number

646 does not refer to a single subscriber line. Instead, it refers to a "dual-tone multiple frequency device (DTMF)" "which could be a detector and/or generator of DTMF signals" (col. 4, lines 14-15). Although only one line is depicted between two videophone parties in Huang's drawing, the description in Huang clearly establishes that two or more telephone lines are used. This is evidenced by the use of two modems (630 and 644) and the recitation of four different telephone numbers in Huang's Claim 1. See also, col. 4, lines 4-6 and 16-20. Therefore, the Examiner's reliance on Huang's drawing is unfounded.

The Examiner further points to the exemplary illustration of separate "lines" in Figures 1 and 2 of the present application. However, the drawings are merely exemplary illustrations and should be viewed with reference to the corresponding description. For example, with respect to Figure 1, the Examiner has ignored that

"although the first connection 115 and second connection 145 are illustrated separately in FIG. 1, those skilled in the art will realize that they may be one in the same when ADSL or G.Lite is used."

(page 9, lines 5-7).

Considering the teachings of Huang in view of the ordinary meanings of the claim terms "channel" and "subscriber line," it is submitted that Huang fails to disclose, teach or even suggest the limitations of transmitting and receiving video and voice

components **via separate channels of a same subscriber line** as recited in independent claims 1 and 24. Appellant therefore respectfully submits that independent claims 1 and 24 should be allowable as they each recite limitations not disclosed by Huang, or any of the other cited references either alone or in combination.

Claims 2, 4-6, 9 and 12-22 are dependent upon independent claim 1 and claims 25, 26 and 30 are dependent upon independent claim 24. Thus, since independent claims 1 and 24 should be allowable as discussed above, claims 2, 4-6, 9, 12-22, 25, 26 and 30 should also be allowable at least by virtue of their dependency on one of independent claims 1 or 24.

In view of the foregoing, it is respectfully submitted that the aforementioned anticipation rejection of claims 1, 2, 13 and 24 is improper, and the withdrawal of such rejection is respectfully requested.

II. THE EXAMINER HAS FAILED TO ESTABLISH A PRIMA FACIE CASE FOR THE OBVIOUSNESS REJECTION

On page 4 of the Final Office Action, claims 4, 5, 26 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of Bremer et al. (Pub. No. US2001/0022836A1).

On page 5 of the Final Office Action, claims 6 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of Mihara (U.S. Patent No. 6,323,892).

On page 5 of the Final Office Action, claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of Mihara (U.S. Patent No. 6,323,892) and further in view of Haegebarth (Japan Pub. No. 02000092463A).

On page 6 of the Final Office Action, claims 14-18 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang (U.S. Patent No. 6,148,072) in view of Bremer et al. (Pub. No. US2001/0022836A1) and further in view of Fan (U.S. Patent No. 6,519,250).

The rejection of these claims is respectfully traversed as follows.

As stated in MPEP § 2143, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or

references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Also, as stated in MPEP § 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Further, as stated in MPEP § 2143.01, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). That is, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970). Additionally, as stated in MPEP § 2141.02, a prior art reference

must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Finally, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

In general, the Examiner's rejection under 35 U.S.C. § 103(a) fails to establish *prima facie* obviousness of the claimed invention because: (1) none of the cited references or their combinations teach or suggest all the elements of the claimed invention, and (2) some of the references, including Huang, even teach away from the claimed invention.

A. Obviousness Rejection of Claims 4, 5, 26 and 30

In rejecting claims 4, 5, 26 and 30, the Examiner asserts that, although not disclosed by Huang, Bremer discloses an apparatus and method for simultaneous multiple telephone type services on a single telephone line and teaches data connections comprising at least one of an asymmetric digital subscriber line (ADSL), a symmetric digital subscriber line (SDSL), a high-data-rate digital subscriber line (HDSL), or a voice-over digital subscriber line (VoDSL). The Examiner therefore concludes that it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Huang's system to provide data connections comprising and ADSL, SDSL, HDSL, or VoDSL, as taught by Bremer.

Appellant respectfully submits that Huang, as discussed above, discloses the transmission and reception of the voice and video components of a video conferencing session **via multiple subscriber lines**. Furthermore, Huang actually teaches away from using a single subscriber line for video conferencing. Huang points out that

[a]lthough POTS lines are the most widely available and least expensive telephone lines, there are disadvantages in using them for videophone communication. The most important disadvantages is probably the bandwidth limitation, currently at 33.6 kilobits per second (kbps). The effect of this limitation is that image quality and motion speed are less than desirable. A solution proposed by the present inventor, as described in PCT publication number WO 98/17053, is to use multiple telephone lines to increase the total bandwidth. As a result, the quality of videophone over POTS could be better than ISDN videophones.

(Col. 1, lines 32-43). As can be seen, Huang considered the bandwidth of a single telephone line too limited for the high demand of videophone communication. Following this rationale, Huang indeed describes the use of multiple telephone lines throughout its disclosure. Reading Huang, a person of ordinary skill in the art, would be discouraged from using a single telephone line for video conferencing.

Bremer, while disclosing the transmission and reception of multiple telephone services over a single subscriber line, fails to disclose the transmission of the voice and video components of a video conferencing session via separate channels of the same subscriber line. Instead, with regard to video conferencing, Bremer discloses a "multimedia PC Internet video phone device 51, which captures video and audio and provides the digitized information to modem 50 for transmission to the destination user. The Internet video phone may use either the PSTN or Internet or other land-type network for data communications" (Bremer, page 3, para. 35) (emphasis added).

Thus, Bremer discloses the transmission and reception of voice content as digital data that is transmitted over a digital data channel along with the digitized video content, whereas independent claims 1 and 24, from which claims 4, 5, 26 and 30 respectively depend, teaches the transmission and reception of **a voice component via a voice channel separate from the data channel, but where both the voice channel and the data channel are on the same subscriber line.** Accordingly, Bremer fails to disclose the feature of transmitting and receiving a voice component of a video conferencing session via a voice channel of a subscriber line and transmitting and receiving a video component via a separate data channel of the same subscriber line and,

therefore, Bremer teaches away from the present invention as claimed.

Thus, because both Huang and Bremer fail to disclose the limitation of both the voice channel and the data channel on the same subscriber line and further because both Huang and Bremer teach away from this limitation, the combination of Bremer with Huang would fail to disclose each and every element recited in independent claims 1 and 24. Accordingly, it is respectfully submitted that the present invention as recited in claims 1 and 24 would not have been obvious over Huang in view of Bremer and, therefore, claims 4, 5, 26 and 30 should also be allowable at least by virtue of their dependency on one of independent claims 1 or 24.

In view of the foregoing, it is respectfully submitted that the aforementioned obviousness rejection of claims 4, 5, 26 and 30 is improper, and the withdrawal of such rejection is respectfully requested.

B. Obviousness Rejection of Claims 6 and 9

In rejecting claims 6 and 9, the Examiner asserts that although Huang does not explicitly disclose a CCD camera configured to capture the video component transmitted via the

second channel and a LCD for displaying the video component received via the data channel, Mihara discloses the feature of a CCD camera and LCD integrated with a communication device and, therefore, it would have been obvious to one skilled in the art to combine Huang and Mihara to arrive at the present invention.

Independent claim 1, from which claims 6 and 9 depend, recites the limitation of transmitting and receiving a voice component of a video conferencing session via a voice channel and transmitting and receiving a video component of the video conferencing session via a video channel, **where both the voice channel and the video channel are of the same subscriber line.** As noted above, this limitation is not disclosed, taught, or suggested by any of the cited references, including Huang and Mihara. Accordingly, because Huang, Mihara and the other cited references do not claim, disclose or even suggest, alone or in combination, the claimed features of independent claim 1, claims 6 and 9 should be allowable at least by virtue of its dependency on independent claim 1.

In view of the foregoing, it is respectfully submitted that the aforementioned obviousness rejection of claims 6 and 9 is improper, and the withdrawal of such rejection is respectfully requested.

C. Obviousness Rejection to Claim 12

In rejecting claim 12, The Examiner asserts that although Huang and Mihara do not disclose the feature of displaying advertisements, Haegebath discloses the display of advertisements transmitted via a second channel when a first channel is not transmitting or receiving voice. The Examiner therefore concludes that it would have been obvious to one skilled in the art to combine Huang, Mihara and Haegebath to arrive at the features recited by claim 12.

Independent claim 1, from which claim 12 depends, recites the limitation of transmitting and receiving a voice component of a video conferencing session via a voice channel and transmitting and receiving a video component of the video conferencing session via a video channel, **where both the voice channel and the video channel are of the same subscriber line.** As noted above, this limitation is not disclosed, taught, or suggested by any of the cited references, including Huang, Mihara and Haegebath. Accordingly, because Huang, Mihara, Haegebath and the other cited references do not claim, disclose or even suggest, alone or in combination, the claimed features of independent claim 1, claim 12 should be allowable at least by virtue of its dependency on independent claim 1.

In view of the foregoing, it is respectfully submitted that the aforementioned obviousness rejection of claim 12 is improper, and the withdrawal of such rejection is respectfully requested.

D. Obviousness Rejection to Claim 14-18, 22, and 25

In rejecting claims 14-18, 22, and 25, the Examiner asserts that it would have been obvious to one skilled in the art to combine Huang's system with the disclosure of Bremer and Fan to provide for fields in a sent packet such as a repeating sequence of characters for synchronization, header information, and an Internet Protocol address of a second communication device, as respectively recited by claims 14-17, 22 and 25. Regarding claim 18, the Examiner asserts that Huang teaches an analog modem to receive a tone burst.

Independent claims 1 and 24, from which claims 14-18, 22, and 25 respectively depend, recites the feature of transmitting and receiving a voice component of a video conferencing session via a voice channel and transmitting and receiving a video component via a data channel, **where both the voice channel and the video channel are of the same subscriber line.** As noted above, this feature is not disclosed by any of the cited references, including Huang, Bremer and Fan. Accordingly, because Huang, Bremer, Fan and the other cited references do not claim, disclose or even suggest, alone or in combination, the claimed features of independent

claims 1 and 24, claims 14-18, 22, and 25 should be allowable at least by virtue of its dependency on one of independent claims 1 and 24.

In view of the foregoing, it is respectfully submitted that the aforementioned obviousness rejection of claims 14-18, 22, and 25 is improper, and the withdrawal of such rejection is respectfully requested.

CONCLUSION

It is respectfully submitted that the Examiner (I) has failed to understand a key difference between the claim invention and the alleged prior art, (II) has failed to establish a *prima facie* case for obviousness rejection.

Thus, it is respectfully submitted that the final rejection of claims 1, 2, 13, and 24 under 35 U.S.C. § 102(e) is improper, and the final rejection of claims 4-6, 9, 12, 14-18, 22, 25-26, and 30 under 35 U.S.C. § 103(a) is improper.

In summary, the Appellants respectfully submit that the applied reference does not disclose or suggest transmitting or receiving voice and video components of a video conferencing session over separate channels of a same subscriber line, as claimed. At least this feature distinguishes the present invention of claims 1, 2, 4-6, 9, 12-18, 22, 24-26, and 30 over the applied art. Further, not all elements of the claimed

invention are taught or suggested by the applied reference. The reference fails to teach the specific advantages achieved by the claimed invention. Accordingly, Appellants submit that the art does not provide any teaching, or suggestion within its teachings, which would lead to the features or advantages of the instant invention, and the claims patentably define over the art.

Thus, it is respectfully submitted that the rejection of all of the pending claims under 35 U.S.C. §§ 102(e) and 103(a) is in error and reversal of the rejections of the appealed claims is clearly in order. Accordingly, reversal of the Final Rejection of claims 1, 2, 4-6, 9, 12-18, 22, 24-26, and 30 is respectfully requested.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0206, and please credit any excess fees to the same deposit account.

Respectfully submitted,

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APPENDIX

1. (Previously Presented) A communications device, comprising:
 a first interface to a voice channel of a subscriber line for
 transmitting and receiving a voice component of a video
 conferencing session;
 a second interface to a data channel of the subscriber line
 for transmitting and receiving a video component of the
 video conferencing session;
 wherein the communications device is configured to establish
 a connection to at least the data channel based at least
 in part on a pre-determined signal received via the
 voice channel.
2. (Previously Presented) The communications device of claim
1, wherein the voice channel is a public switched telephone
network (PSTN).
3. (Cancelled)
4. (Previously Presented) The communications device of claim
2, wherein the data channel comprises at least one of an
asymmetric digital subscriber line (ADSL), a symmetric digital
subscriber line (SDSL), a high-data-rate digital subscriber line
(HDSL), or a voice-over digital subscriber line (VoDSL).
5. (Previously Presented) The communications device of claim
4, further comprising a digital subscriber line (DSL) modem.
6. (Previously Presented) The communications device of claim
1, further comprising a charge coupled device (CCD) configured to

capture the video component transmitted via the second channel.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The communications device of claim 1, further comprising a liquid crystal display (LCD) for displaying the video component received via the data channel.

10. (Canceled)

11. (Canceled)

12. (Previously Presented) The communications device of claim 9, wherein the liquid crystal display (LCD) is used to display advertisements transmitted via the data channel when the voice channel is not transmitting or receiving voice component.

13. (Previously Presented) The communications device of claim 1, wherein the pre-determined signal is a tone burst comprising a sequence of data transmitted from a second communications device via the voice channel.

14. (Previously Presented) The communications device of claim 13, wherein the sequence of data comprises a first field, the first field comprising an Internet protocol (IP) address of the second communications device.

15. (Previously Presented) The communications device of claim 14, wherein the sequence of data comprises a second field, the

second field comprising a repeating sequence of characters allowing the communications device to synchronize to the tone burst.

16. (Previously Presented) The communications device of claim 15, wherein the sequence of data comprises a third field, the third field comprising header information to identify the second communications device as being a similarly-configured communications device.

17. (Original) The communications device of claim 16, wherein the sequence of data comprises a fourth field, the fourth field comprising a checksum character that serves as an error detection mechanism to ensure that the tone burst was transmitted correctly.

18. (Previously Presented) The communications device of claim 13, further comprising an analog modem to receive the tone burst.

19. (Original) The communications device of claim 18, further comprising a filter to pass the tone burst while excluding any unused frequencies.

20. (Original) The communications device of claim 19, further comprising an analog to digital converter configured to digitize the tone burst.

21. (Original) The communications device of claim 20, wherein the analog to digital converter is a pulse code modulation (PCM) decoder.

22. (Previously Presented) The communications device of claim

14, wherein the Internet Protocol (IP) address of the second communications device is used to establish the second channel.

23. (Canceled)

24. (Previously Presented) A method for establishing a video conferencing session, comprising the steps of:

- a) providing a first interface to a voice channel of a subscriber line for transmitting and receiving a voice component of the video conferencing session;
- b) providing a second interface to a data channel of a subscriber line for transmitting and receiving a video component of the video conferencing session; and
- c) establishing a connection to at least the data channel based at least in part on a pre-determined signal received over the voice channel.

25. (Previously Presented) The method of claim 24, wherein the pre-determined signal is a tone burst comprising a sequence of data-transmitted from a second communications device via the first channel, the sequence of data including a field comprising an Internet Protocol (IP) address of the second communications device.

26. (Previously Presented) The method of claim 24, wherein the voice channel comprises a public switched telephone network (PSTN) and the data channel comprises at least one of an asymmetric digital subscriber line (ADSL), a symmetric digital subscriber line (SDSL), a high-data-rate digital subscriber line (HDSL), or a voice-over digital subscriber line (VoDSL).

27. (Previously Presented) A communications device, comprising:
a first interface to a first channel for transmitting and receiving voice signals over a voice network;
a second interface to a second channel for transmitting and receiving video data over a data network;
an analog modem to receive a tone burst, the tone burst comprising a sequence of data transmitted from a second communications device via the first channel;
a filter to pass the tone burst while excluding any unused frequencies;
wherein the communications device is configured to establish a connection to at least the second channel upon receiving the tone burst.

28. (Previously Presented) The communications device of claim 27, wherein the sequence of data includes a field comprising an Internet Protocol (IP) address of the second communications device.

29. (Previously Presented) The communications device of claim 27, wherein the voice channel comprises a public switched telephone network (PSTN) and the data channel comprises at least one of an asymmetric digital subscriber line (ADSL), a symmetric digital subscriber line (SDSL), a high-data-rate digital subscriber line (HDSL), or a voice-over digital subscriber line (VoDSL), a digital T1 line, a digital T3 line, a digital E1 line, a digital E3 line, an Integrated Services Digital Network (ISDN), an Ethernet network, or a synchronous optical network (SONET).

30. (Previously Presented) The communications device of claim 1, wherein the data channel comprises at least one of an asymmetric digital subscriber line (ADSL), a symmetric digital subscriber line (SDSL), a high-data-rate digital subscriber line (HDSL), or a voice-over digital subscriber line (VoDSL).